Supplement to

NAVAL ENGINEERS JOURNAL

January, March, May, July, September, November 1983

★★★★★★★

INDEX

VOLUME XCV
1983

★★★★★★★

A		PAGE
ABBOTT, JACK		
EDITOR'S CLIPBOARD: Message From The Chairman Of The Papers Committee	Jan.	92
ABBOTT, JACK W. *with* CHARLES S. SLEMON		
FOCAS — A New Look In Combat System Signal Transmission	May	51
ABRAHAM, DAVID		
Hardware and Software Modularity for Shipboard Systems	May	227
ACKER, FRANK E. *with* DAVID L. GREENE & DR. JAMESV. JOLLIFF		
Modeling of Weight and Volume for Advanced Alternating Current Electric Drive Machinery	May	192
ADAM, DAVID J. *with* JAMES W. BANHAM		
Shipboard Main Boiler And Feed Pump Control System On-Line Alignment Verification	Dec.	31
ADAMS, J.D. *with* F.M. WILSON & J.D. ADAMS		
The Surface Effect Catamaran — Progress in The Concept Assessment	May	301
ALLEN, RAY *with* FRED M. PRAISSMAN		
An Approach To Intra-Cycle Maintenance Material Management	March	41
Applications of Hybrid Statistics and the Median		
by LEWIS M. CAMPBELL	Jan.	58
The Application of Planning Contract Concept To A Complex Navy Surface Ship Overhaul		
by W.R. NODELL & PETER N. SIAS	March	51
An Approach To Intra-Cycle Maintenance Material Management		
by FRED M. PRAISSMAN & RAY ALLEN	March	41
ASNE Day 1983 — Acknowledgment and Proceedings		
by CAPTAIN JAMES L. MCVOY, USN (RET.) — Secretary-Treasurer	July	31
ASNE Day 1983 Awards:		
Harold E. Saunders Award — REAR ADMIRAL NATHAN SONENSHEIN, USN (RET.)		60
Gold Medal Award — CAPTAIN BRYCE INMAN, USN (RET.)		63
Solberg Award — A. ERICH BAITIS		67
"Jimmie" Hamilton Award — DR. JAMES J. JOLLIFF *and* DR. DAVID L. GREENE		69
Frank G. Law Award — FRANK J. SMOLLON		72
ASNE Day 1983 — BANQUET ADDRESS		
The Growing Scientific Illiteracy of American Youth		
by The HONORABLE JAMES F. GOODRICH-Under Secretary of the NAVY	July	56
ASNE Day 1983 — LUNCHEON ADDRESS		
U.S. Naval Air Power — Superior To Any In The World		
by VICE ADMIRAL ERNEST R. SEYMOUR, USN Commander, Naval Air Systems Command	July	53
ASNE Day 1983 — "STATE-OF-THE-SOCIETY" SPEECH		
by RICHARD C. FAY — ASNE President 1982-83	July	49
ASNE Day Technical Papers: "Comments and Discussions"		
Session 2A — Combatants-Past and Future (May, pp. 3-62)	July	75
Session 2B — Structures (May, pp. 63-98)	July	79
Session 3A — Ship Design (May, pp. 101-143)	July	86
Session 3B — Logistics (May, pp. 145-172)	July	95
Session 3C — Combat Systems (May, pp. 173-191)	July	101
Session 4A — Propulsion (May, pp. 192-226)	July	103
Session 4B — Systems Analysis (May, pp. 227-255)	July	113
Session 6A — Seakeeping (May, pp. 256-281)	July	120
Session 6B — Advanced Ships (May, pp. 283-301)	July	125
ASNE Day 1983 Technical Papers:		
Session 2	May	3, 51, 63, 87
Session 3	May	101, 109, 127, 145, 165, 173, 178
Session 4	May	192, 202, 214, 227, 234, 244
Session 6	May	283, 301

B

BAITIS, A. ERICH *with* DENNIS A. WOOLAVER & LT. THOMAS A. BECK, USCG
Rudder Roll Stabilization For Frigates ..... May 267
BALES, MS. SUSAN L.
Designing Ships To The Natural Environment ..... March 31
BANHAME, JAMES W. *with* DAVID J. ADAM
Shipboard Main Boiler And Feed Pump Control System On-Line Alignment Verification ..... Dec. 31
BASKERVILLE, CDR. JAMES E. *with* LCDR. DONALD L. LIBERATORE, USN
The Introduction of Heat Recoverable Couplings to Ship Repair and Maintenance ..... Dec. 63
Battle Group Tactical Data Links; Basic Principles For the Combat Systems Designer
by DR. RICHARDL.W. WELCH ..... Jan. 24
BEACH, J.E. *with* ALFRED DINSENBACHER & JEROME P. SIKORA
A Method For Estimating Lifetime Loads And Fatigue Lives for SWATH And Conventional Monohull Ships ..... May 63
BECK, LT. THOMAS A., USCG *with* A. ERICH BAITIS & DENNIS A. WOOLAVER
Rudder Roll Stabilization For Frigates ..... May 267
BENEL, RUSSELL A. *with* NORMAN I. STEIN & THOMAS B. MALONE
An Overview of the Role of the NAVSEA Human Factors Engineering Program in Ship Design ..... July 139
Blue-Green Lasers For Submarine Communications
by LCDR. WILLIAM E. WRIGHT, USN ..... May 173
Book Reviews: "Between the Bookends" ..... Jan. 90, Mar. 75, May 320, July 133, Sept. 90, Nov.
BRANNON, DR. JAMES H.
Surface Preparation by Flashblasting ..... July 135
BROWER, KENNETH S. *with* JAMES KEHOE & EDWARD N. COMSTOCK
Seakeeping and Combat System Performance — The Operator's Assessment ..... May 256
BROWER, KENNETH S., *with* JAMES W. KEHOE, HERBERT A. MEIER & CDR. ERIC RUNNERSTROM, USN.
U.S. and Foreign Hull Form, Machinery and Structural Design Practices ..... Nov.
BYERS, E.D. *with* J.J. SLAGER & R.L. SCHAFFER
Towards an Improved Hull Form Design Methodology ..... May 109

C

CAMPBELL, LEWIS M.
Applications of Hybrid Statistics and the Median ..... Jan. 58
Commercial Applications of Advanced Marine Vehicles For Express Shipping
by GEORGE LUEDEKE, JR. & ROBERT B. FARNHAM ..... May 283
COMSTOCK, EDWARD N. *with* JAMES W. KEHOE & KENNETH S. BROWER
Seakeeping and Combat System Performance — The Operator's Assessment ..... May 256
COVICH, PHILIP *with* MICHAEL HAMMES
Repeat Ship Designs — Facts and Myths ..... May 101
CURRAN, WILLIAM C. *with* ERWIN K. STRAUBINGER & VINCENT L. FIGHERA
Fundamentals of Naval Surface Ship Weight Estimating ..... May 127

D

DENISON, LON L. *with* ARTHUR F. GREEN
New Overhaul Techniques for Unique Naval Deck Machinery ..... March 67
Design Tradeoffs for Destroyers
by DR. DEAN A. RAINS ..... May 234
Designing Reliability and Maintainability Into the RACER System
by WAYNE S. MATTSON ..... May 202
Designing Ships To The Natural Environment
by MS. SUSAN L. BALES ..... March 31
DICKSON, ROBERT W., P.E.
EDITOR'S CLIPBOARD—Lookouts On The Titanic ..... March 50
DINSENBACHER, ALFRED *with* JEROME P. SIKORA & J.E. BEACH
A Method For Estimating Lifetime Loads And Fatigue Lives for SWATH And Conventional Monohull Ships ..... May 63
DIXON, THOMAS P.
Fiber Optics For Shipboard Radar Data Transmission ..... Jan. 50

E

ECCLES, HENRY E., RADM., USN (RET.)
EDITOR'S CLIPBOARD: LOGISTICS, A Comprehensive Process ..... July 157
EDITOR'S CLIPBOARD: Letter To The Editor
by W.S. HOFFMAN ..... Dec. 72
EDITOR'S CLIPBOARD: "Lookouts On The Titanic"
by ROBERT W. DICKINSON, P.E. ..... March 50

EDITOR'S CLIPBOARD: Message From The Chairman Of The Papers Committee
by JACK ABBOTT ..... Jan. 92
EDITOR'S CLIPBOARD: Reliability, Maintainability, Availability — The Real Question
by CAPTAIN JAMES C. RICHARDSON, USN & PAUL I. BERMAN ..... Sept. 76
89 AND 49 YEARS AGO —
A Bird's Eye View of the Steel Casting Situation In Europe ..... Jan. 83
British Ordnance Notes ..... May 312
An Evaporation Explosion ..... May 313
International Engineering Congress ..... Jan. 78
Naval Construction in 1933 ..... July 171
On the Measurement of Wake Currents ..... Mar. 81
Oxygen In Feed and Boiler Waters ..... May 314
The Propulsive Power of Screw Ships ..... July 165
The Qualities and Performances of Recent First Class Battleships ..... Nov. 67
Rear Admiral Robert S. Griffin, USN: An Appreciation ..... March 77
Ships ..... Sept. 83
Visibility at Sea ..... Sept. 87
The Vulcan Hydraulic Clutch ..... Nov. 67
Establishing Mobile Acoustin Communication System Safety on USS Nautilus
by DR. MICHAEL A. TUCCIO ..... Sept. 71

F

FARNHAM, ROBERT B. *with* GEORGE LUEDEKE, JR.
Commercial Applications of Advanced Marine Vehicles For Express Shipping ..... May 283
FAY, RICHARD C.
ASNE Day 1983 — "State-of-the-Society" Speech ..... July 49
FENTON, PAUL H., CDR., USN
Submarine Selected Restricted Availability Management ..... Nov. 27
Fiber Optics For Shipboard Radar Data Transmission
by THOMAS P. DIXON ..... Jan. 50
FIGHERA, VINCENT L. *with* ERWIN K. STRAUBINGER & WILLIAM C. CURRAN
Fundamentals of Naval Surface Ship Weight Estimating ..... May 127
FOCAS — A New Look In Combat System Signal Transmission
by CHARLES S. SLEMON & JACK W. ABBOTT ..... May 51
FRISCH, DR. FRANZ A.P.
Technology & Taxes (Conceptual Sketch of Reality) ..... Jan. 33
Fundamentals of Naval Surface Ship Weight Estimating
by ERWIN K. STRAUBINGER, WILLIAM C. CURRAN & VINCENT L. FIGHERA ..... May 127

G

GOODING, THOMAS G. *with* NATALE S. NAPPI & CHRISTOPHER J. WIERNICKI
The Structural Synthesis Design Program — It's Impact On the Fleet ..... May 87
GOODRICH, THE HONORABLE JAMES F. — Under Secretary of the NAVY
ASNE Day 1983 — BANQUET ADDRESS "The Growing Scientific Illiteracy of American Youth" ..... July 56
GREEN, ARTHUR F. *with* LON L. DENISON
New Overhaul Techniques for Unique Naval Deck Machinery ..... March 67
GREENE, DAVID L. *with* FRANK E. ACKER & DR. JAMES V. JOLLIFF
Modeling of Weight and Volume for Advanced Alternating Current Electric Drive Machinery ..... May 192

H

HAMMES, MICHAEL *with* PHILIP COVICH
Repeat Ship Designs — Facts and Myths ..... May 101
Hardware and Software Modularity for Shipboard Systems
by DAVID ABRAHAM ..... May 227

I

Internal Ballistics Of Weapon Launching Systems
by DR. JON J. YAGLA ..... May 178
International Regulations — What Price Compliance?
by DR. JAMES V. JOLLIFF ..... May 244
The Introduction of Heat Recoverable Couplings to Ship Repair and Maintenance
by LCDR. DONALD L. LIBERATORE, USN & CDR. JAMES E. BASKERVILLE ..... Dec. 63

J

JOEST, FRED
The NAVY's AFS Phased Maintenance Program: A Maintenance Management Success Story ..... May 156
JOHNSON, JOHN E. *with* LCDR. ROBERT S. ORTMANN, USN, & MARTY PEASE
Ship Repair Using Multi-Ship Cost Type Contracting ..... Sept. 64
JOLLIFF, DR. JAMES V.
International Regulations — What Price Compliance? ..... May 244
JOLLIFF, DR. JAMES *with* FRANK E. ACKER & DAVID L. GREENE
Modeling of Weight and Volume for Advanced Alternating Current Electric Drive Machinery ..... May 192
JUNG, DENNIS J.
U.S. NAVY Gas Turbine Inlet Development Program ..... Dec. 55

K

KEHOE, JAMES W. *with* KENNETH S. BROWER & EDWARD N. COMSTOCK
Seakeeping and Combat System Performance — The Operator's Assessment ..... May 256
KEHOE, JAMES W. *with* KENNETH S. BROWER, HERBERT A. MEIER & CDR. ERIC RUNNERSTROM, USN
U.S. and Foreign Hull Form, Machinery and Structural Design Practices ..... Nov. 36

L

LANZILLO, KENNETH F.
Production Line Concept For Overhauling Submarines, Its Time Has Come! ..... May 145
Lessons of the Falklands
by CAPTAIN JOHN W. WALKER, USN ..... July 129
LIBERATORE, LCDR. DONALD L., USN *with* CDR. JAMES E. BASKERVILLE
The Introduction of Heat Recoverable Couplings to Ship Repair and Maintenance ..... Dec. 63
Linear DC Motor Catapult System
by D.S. TOFFOLO ..... Jan. 67
LUEDEKE, GEORGE JR. *with* ROBERT B. FARNHAM
Commercial Applications of Advanced Marine Vehicles For Express Shipping ..... May 283

M

MALONE, THOMAS B. *with* NORMAN I. STEIN & RUSSELL A. BENEL
An Overview of the Role of the NAVSEA Human Factors Engineering Program in Ship Design ..... July 139
MARTIN, WILLIAM R. *with* DR. DANIEL R. UHR, JR.
Safe Chemical Cleaning Of Freon-Side Steel Shells of R-11 and R-114 Air Conditioning Plant Heat Exchangers ..... Dec. 47
MATTSON, WAYNE S.
Designing Reliability and Maintainability Into the RACER System ..... May 202
MCVOY, JAMES L., CAPTAIN, USN (RET.)
ASNE Day 1983 — Acknowledgments and Proceedings ..... July 31
Mechanical Cross-Connect Gear Transmission For Destroyers
by JAMES A. WILLIS ..... May 214
MEIER, HERBERT A. *with* JAMES W. KEHOE, KENNETH S. BROWER & CDR. ERIC RUNNERSTROM, USN
U.S. and Foreign Hull Form Machinery and Structural Design Practices ..... Nov. 36
A Method For Estimating Lifetime Loads And Fatigue Lives for SWATH And Conventional Monohull Ships
by JEROME P. SIKORA, ALFRED DINSENBACHER & J.E. BEACH ..... May 63
Modeling of Weight and Volume for Advanced Alternating Current Electric Drive Machinery
by FRANK E. ACKER, DAVID L. GREENE & DR. JAMES V. JOLLIFF ..... May 192

N

NAPPI, NATALE S. *with* THOMAS G. GOODING & CHRISTOPHER J. WIERNICKI
The Structural Synthesis Design Program — It's Impact On The Fleet ..... May 87
The NAVY's AFS Phased Maintenance Program: A Maintenance Management Success Story
by FRED JOEST ..... May 156
New Overhaul Techniques for Unique Naval Deck Machinery
by MR. LON L. DENISON & MR. ARTHUR F. GREEN ..... March 67
NODELL, W.R. *with* PETER N. SIAS
The Application of Planning Contract Concept To A Complex Navy Surface Ship Overhaul ..... March 51
NYHART, J.K. *with* HARILAOS N. PSARAFTIS & PAUL J. YAROSCHAK
Putting An Oil Spill Cleanup Computer Model To Work For The NAVY ..... May 165

O

O'HARA, FRANK *with* ARTHUR W. SCHMIDT
Pre-Acquisition Planning ..... Dec. 31
ORTMANN, ROBERT A., LCDR., USN *with* JOHN E. JOHNSON & MARTY PEASE
Ship Repair Using Multi-Ship Cost Type Contracting ..... Sept. 64
An Overview of the Role of the NAVSEA Human Factors Engineering Program in Ship Design
by NORMAN I. STEIN, RUSSELL A. BENEL, PH.D. & THOMAS B. MALONE, PH.D. ..... July 139

P

PEASE, MARTY *with* LCDR. ROBERT A. ORTMANN, USN & JOHN E. JOHNSON
Ship Repair Using Multi-Ship Cost Type Contracting ..... Sept. 64
PRAISSMAN, FRED M. *with* RAY ALLEN
An Approach To Intra-Cycle Maintenance Material Management ..... March 41
Pre-Acquisition Planning
by FRANK O'HARA & ARTHUR W. SCHMIDT ..... Dec. 31
Production Line Concept For Overhauling Submarines, Its Time Has Come!
by KENNETH F. LANZILLO ..... May 165
PSARAFTIS, HARILAOS N. *with* J.K. NYHART & PAUL J. YAROSCHAK
Putting An Oil Spill Cleanup Computer Model To Work For The NAVY ..... May 165
Putting An Oil Spill Cleanup Computer Model To Work For The NAVY
by J.K. NYHART, HARILAOS N. PSARAFTIS & PAUL J. YAROSCHAK ..... May 165

R

RAINS, DR. DEAN A.
Design Tradeoffs for Destroyers ..... May 234
RAMSEY, RAYMOND
A Time For Shipbuilding Renaissance ..... Sept. 33
Repeat Ship Designs — Facts and Myths
by PHILIP COVICH & MICHAEL HAMMES ..... May 101
Rudder Roll Stabilization For Frigates
by A. ERICH BAITIS, DENNIS A. WOOLAVER & LT. THOMAS A. BECK, USCG ..... May 267
RUNNERSTROM, ERIC, CDR, USN *with* JAMES W. KEHOE, KENNETH S. BROWER & HERBERT A. MEIER
U.S. and Foreign Hull Form, Machinery and Structural Design Practices ..... Nov.

S

Safe Chemical Cleaning Of Freon-Side Steel Shells of R-11 And R-114 Air Conditioning Plant Heat Exchangers
by WILLIAM R. MARTIN & DR. DANIEL R. UHRE, JR. ..... Dec. 47
SCHAFFER, R.L. *with* E.D. BYERS & J.J. SLAGER
Towards an Improved Hull Form Design Methodology ..... May 109
SCHMIDT, ARTHUR W. *with* FRANK O'HARA
Pre-Acquisition Planning ..... Dec. 31
Seakeeping and Combat System Performance — The Operator's Assessment
by JAMES W. KEHOE, KENNETH S. BROWER & EDWARD N. COMSTOCK ..... May 256
SEYMOUR, ERNEST R., VICE ADMIRAL, USN — Commander, Naval Air Systems Command
ASNE Day 1983 Luncheon Address "U.S. Naval Air Power — Superior to Any In The World" ..... July 53
Shipboard Main Boiler And Feed Pump Control System On-Line Alignment Verification
by JAMES W. BANHAM & DAVID J. ADAM ..... Dec. 39
Ship Repair Using Multi-Ship Cost Type Contracting
by LCDR. ROBERT A. ORTMANN, USN, JOHN E. JOHNSON & MARTY PEASE ..... Sept. 64
SIAS, PETER N. *with* W.R. NODELL
The Application of Planning Contract Concept To A Complex NAVY Surface Ship Overhaul ..... March 51
SIKORA, JEROME P. *with* ALFRED DINSENBACHER & J.E. BEACH
A Method For Estimating Lifetime Loads And Fatigue Lives for SWATH and Conventional Monohull Ships ..... May 63
SIMS, PHILIP
Trends In Surface Warship Design ..... May 3
SLAGER, J.J. *with* R.L. SCHAFFER & E.D. BYERS
Towards an Improved Hull Form Design Methodology ..... May 109
SLEMON, CHARLES S. *with* JACK W. ABBOTT
FOCAS — A New Look In Combat System Signal Transmission ..... May 51
STEIN, NORMAN I. *with* RUSSELL A. BENEL, PH.D. & THOMAS B. MALONE, PH.D.
An Overview of the Role of the NAVSEA Human Factors Engineering Program in Ship Design ..... July 139
STRAUBINGER, ERWIN K. *with* WILLIAM C. CURRAN & VINCENT L. FIGHERA
Fundamentals of Naval Surface Ship Weight Estimating ..... May 127
STRANDELL, PATRICIA A.
Stripping Systems For Bulk Fuel Storage Tanks ..... Nov. 54

Stripping System For Bulk Fuel Storage Tanks
by PATRICIA A. STRANDELL ..... Nov. 54
The Structural Synthesis Design Program — It's Impact on the Fleet
by CHRISTOPHER J. WIERNICKI, THOMAS G. GOODING & NATALE S. NAPPI ..... May 87
Submarine Selected Restricted Availability Management
by CDR. PAUL H. FENTON, USN ..... Nov. 27
The Surface Effect Catamaran — Progress In The Concept Assessment
by F.W. WILSON, P.R. VIARS & J.D. ADAMS ..... May 301
Surface Preparation by Flashblasting
by DR. JAMES H. BRANNON ..... July 135

T

Technology & Taxes (Conceptual Sketch of Reality)
by DR. FRANZ A.P. FRISCH ..... Jan. 33
TOFFOLO, D.S.
Linear DC Motor Catapult System ..... Jan. 67
A Time For Shipbuilding Renaissance
by RAYMOND RAMSAY ..... Sept. 33
Towards An Improved Hull Form Design Methodology
by R.L. SCHAFFER, D.E. BYERS & J.J. SLAGER ..... May 109
Trends In Surface Warship Design
by PHILIP SIMS ..... May 33
TUCCIO, DR. MICHAEL A.
Establishing Mobile Acoustic Communication System Safety on USS Nautilus ..... Sept. 71

U

UHR, DR. DANIEL R., JR. *with* WILLIAM R. MARTIN
Safe Chemical Cleaning of Freon-Side Steel Shells of R-11 and R-114 Air Conditioning Plant Heat Exchangers ..... Dec. 47
U.S. and Foreign Hull Form, Machinery and Structural Design Practices
by JAMES W. KEHOE, KENNETH S. BROWER, HERBERT A. MEIER & CDR. ERIC RUNNERSTROM, USN ..... Nov.
U.S. NAVY Gas Turbine Inlet Development Program
by DENNIS J. JUNG ..... Dec. 55

V

VIARS, P.R. *with* F.W. WILSON & J.D. ADAMS
The Surface Effect Catamaran — Progress in The Concept Assessment ..... May 301

W

WALKER, JOHN W., CAPTAIN, USN
Lessons of the Falklands ..... July 129
WELCH, DR. RICHARD L.W.
Battle Group Tactical Data Links: Basic Principles For The Combat Systems Designer ..... Jan. 24
WIERNICKI, CHRISTOPHER J. *with* THOMAS G. GOODING & NATALE S. NAPPI
The Structural Synthesis Design Program — It's Impact On The Fleet ..... May 87
WILLIS, JAMES A.
Mechanical Cross-Connect Gear Transmission For Destroyers ..... May 214
WILSON, F.W. *with* P.R. VIARS & J.D. ADAMS
The Surface Effect Catamaran — Progress in The Concept Assessment ..... May 301
WOOLAVER, DENNIS A. *with* A. ERICH BAITIS & LT. THOMAS A. BECK, USCG
Rudder Roll Stabilization For Frigates ..... May 267
WRIGHT, LCDR. WILLIAM E., USN
Blue-Green Lasers For Submarine Communications ..... May 173

Y

YAGLA, DR. JON J.
Internal Ballistics Of Weapon Launching Systems ..... May 178

advanced marine
enterprises, incorporated

naval architecture/marine and ocean engineering/management sciences

1725 jefferson davis highway, arlington, va 22202 (703) 979-9200

san diego, california • • • virginia beach, virginia • • • philadelphia, pennsylvania